

Application No. 10/731,606
Reply to Office Action of March 3, 2009

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REMARKS

In the Office Action dated March 3, 2009, claims 1-26 [*sic*] are pending and claims 1-26 stand rejected. Reconsideration is requested at least for the reasons discussed hereinbelow.

The amendment to claim 1 corrects a typographical error in spelling.

According to the present application, an image forming apparatus comprises image reading means for reading an image formed on a sheet, memory reading means for reading an encryption key from a memory formed on said sheet when said image reading means reads the image, and decrypting means for decrypting an image signal of the image read by said image reading means, with the encryption key read by said memory reading means, wherein an image based on the image signal decrypted by said decrypting means is formed (recorded) on another sheet.

Claims 1-4, 12, 13 and 21-24 are rejected under 35 U.S.C. §103(a) over Okamoto et al (US 6,659,353; "Okamoto") in view of Imai (US 5,512,977). Okamoto discloses a method for checking sheets for forgery wherein the sheet is provided with an electronic circuit chip from which information can be read out or written and having visible information. Although Okamoto describes the performance of acquiring an image signal (the Examiner cites col. 7, lines 5-10), the image signal acquired by the scanner 43 of Okamoto is not encrypted with an encryption key created when the image is acquired and written into a memory on the sheet along with the encryption key being written into a memory on the sheet. Similarly, the other references to passages in Okamoto fail to teach or suggest the presently claimed image forming apparatus, as set forth in present claims 1, 12 or 21, or claims dependent therefrom.

Thus, Okamoto fails to describe at least "writing the encryption key into a memory on the sheet" and "reading the encryption key from the memory on said sheet." As information peculiar to the sheet to be stored in the electronic circuit chip, there is a description about information, for example, physical/chemical information of the electronic circuit chip and information of shapes or geometrical factors of distinctively discernible sheet constituent elements and so on, in addition to

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visible information. However, Okamoto fails to describe how to obtain an encryption key to be used at the time of encryption or decryption, much less storing the encryption key in the electronic circuit chip.

The Examiner admits that Okamoto fails to "disclose an encryption key creating unit for creating an encryption key when said acquisition unit acquires an image signal." However, Okamoto also fails to disclose or suggest at least the following claimed elements of claim 1:

an encrypting unit for encrypting the image signal with the encryption key created by said encryption key creating unit;

a writing unit for writing the encryption key and the encrypted image signal into the one or a plurality of memories on said sheet;

a reading unit for reading an encrypted image and encryption key from the sheet; and

a decryption unit for decrypting the encrypted image using the encryption key read by the reading unit;

or at least the following claimed elements of claim 12:

a memory reading unit for reading the encryption key from the memory on said sheet having one or a plurality of memories when said image reading unit reads the image; and

a decrypting unit for decrypting the image signal of the image read by said image reading unit, with the encryption key read by said memory reading unit,

wherein said image forming unit forms an image based on the image signal decrypted by said decrypting unit on another sheet;

or at least the following claimed elements of claim 21:

a sheet having one or a plurality of memories containing an encryption key and an encrypted image;

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a reading unit for reading an encrypted image signal and encryption key from the sheet; and

an image forming unit for forming an image based on the encrypted image signal and encryption key read by said reading unit.

The Examiner cites Imai to make up for the acknowledged deficiency in Okamoto. However, Imai fails to make up for the deficiencies in Okamoto. Imai has been discussed in detail in previous papers filed by Applicant; see, for example, paper dated December 9, 2008. For example, Imai *fails* to teach or suggest a sheet, on which the encrypted image is formed, the sheet having one or a plurality of memories in which the encryption key is written. As aforesaid, Imai *fails* to teach or suggest, for example, at least the following elements of claim 1:

- i. an image forming apparatus including an acquisition unit for acquiring an image signal, and an image forming unit for forming an image based on the image signal acquired by said acquisition unit on a sheet having one or a plurality of memories;
- ii. a writing unit for writing the encryption key into the memory on said sheet having one or a plurality of memories;
- iii. said image forming unit forms an image based on the image signal encrypted by said encrypting unit on said sheet having one or a plurality of memories; and
- iv. wherein said image forming unit forms an image based on the image signal encrypted by said encrypting unit on said sheet having one or a plurality of memories..

Although Imai describes an encryption key stored in a memory, there is not even a hint of a suggestion that the memory for storage of the encryption key be contained in the sheet bearing the encrypted image.

Thus, Imai also fails to teach or suggest at least the following claimed elements of claim 1:

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a writing unit for writing the encryption key and the encrypted image signal into the one or a plurality of memories on said sheet;

a reading unit for reading an encrypted image and encryption key from the sheet; and

a decryption unit for decrypting the encrypted image using the encryption key read by the reading unit;

or at least the following claimed elements of claim 12:

a memory reading unit for reading the encryption key from the memory on said sheet having one or a plurality of memories when said image reading unit reads the image; and

a decrypting unit for decrypting the image signal of the image read by said image reading unit, with the encryption key read by said memory reading unit;

wherein said image forming unit forms an image based on the image signal decrypted by said decrypting unit on another sheet;

or at least the following claimed elements of claim 21:

a sheet having one or a plurality of memories containing an encryption key and an encrypted image;

a reading unit for reading an encrypted image signal and encryption key from the sheet; and

an image forming unit for forming an image based on the encrypted image signal and encryption key read by said reading unit.

Thus, it is not seen how any combination of Okamoto and Imai would suggest the claimed invention to one of ordinary skill in the art.

Regarding claim 2, neither Okamoto nor Imai even suggest that the encryption key be stored in a memory on the sheet. Thus, it is not seen how any combination of Okamoto and Imai would

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suggest "a memory reading unit for reading the encryption key from memory when said image reading unit reads the image," as claimed herein.

Regarding claim 3, it is not seen how any combination of Okamoto and Imai would suggest "said writing unit writes the encryption key and the information acquired or created by said information acquiring/creating unit into the same memory, or different memories on said sheet having one or a plurality of memories," as claimed herein.

Regarding claim 4 and 13, it is not seen how any combination of Okamoto and Imai would suggest "said memory reading unit reads the encryption key and information about the image encrypted with the encryption key from the same or different memories on said sheet having one or a plurality of memories when said image reading unit reads the image, and said image forming apparatus further comprises a display unit for displaying the information read by said memory reading unit," as claimed herein.

Regarding claims 22 and 23, it is not seen how any combination of Okamoto and Imai would suggest "sheet comprises a first memory containing an encryption key and a second memory containing an encrypted image," as claimed herein.

Regarding claim 24, it is not seen how any combination of Okamoto and Imai would suggest "said memory reading unit reads the encryption key and information about the image encrypted with the encryption key from said first memory on said sheet when said image reading unit reads the image, and said image forming apparatus further comprises a display unit for displaying the information read by said memory reading unit," as claimed herein.

It is not seen how any combination of Okamoto and Imai would provide the presently claimed invention. Thus, it is not seen how the presently claimed invention would have been obvious to one of ordinary skill in the art in view of any combination of Okamoto and Imai.

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Claims 5-11, 14-20, 25 and 26 are rejected under 35 U.S.C. §103(a) over Okamoto in view of Imai in further view of Harada et al (US 2003/0007640; "Harada"). Okamoto and Imai are discussed above. Claims 5-11, 14-20, 25 and 26 are patentable for at least the same reasons as discussed above. Harrada *fails* to make up for the deficiencies in Okamoto and Imai. Harrada also fails to teach or suggest, for example:

an image forming apparatus having, for example, a writing unit for **writing the encryption key into the memory on said sheet having one or a plurality of memories**, wherein said image forming unit forms an image based on the image signal encrypted by said encrypting unit **on said sheet having one or a plurality of memories**,

an image reading unit for reading the image formed on said sheet having one or a plurality of memories and a memory reading unit for reading the **encryption key from the memory when said image reading unit reads the image**,

an **information acquiring/creating unit** for acquiring or creating information **about the image encrypted with the encryption key**, wherein said writing unit writes the **encryption key and the information acquired or created by said information acquiring/creating unit into the same memory, or different memories on said sheet having one or a plurality of memories, or**

a memory reading unit that reads the **encryption key and information about the image encrypted with the encryption key from the same memory, or different memories on said sheet having one or a plurality of memories, when said image reading unit reads the image**,

as claimed herein.

Thus, it is not seen how the presently claimed invention would have been obvious to one of ordinary skill in the art in view of any combination of Okamoto, Imai and Harada.

In view of the discussion above, Applicant respectfully submits that the pending application is in condition for allowance. An early reconsideration and notice of allowance are earnestly solicited.

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If for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

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Respectfully submitted,

By 

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